A Hepatitis C (HCV) Infection Dilemma

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Introduction

- HIV/HCV coinfection increases liver-related morbidity and mortality[1]
- This special population should be prioritized for treatment[2]
- Although currently available direct-acting antivirals (DAAs) are safe and effective, there are many drug interactions (DIs)
- Carbamazepine (CBZ) is contraindicated with all available DAAs[3]
- There are no clear treatment options for patients who cannot stop CBZ

Case Report

HPI: Patient is a 59-year-old man with well-controlled HIV on HAART, well-controlled trigeminal neuralgia on CBZ, anemia, and chronic HCV, non-cirrhotic (FibroScan 12 kPa), treatment naïve.

- Genotype 1a
- HCV RNA 14,400,000 IU/mL
- ALT 29 IU/L

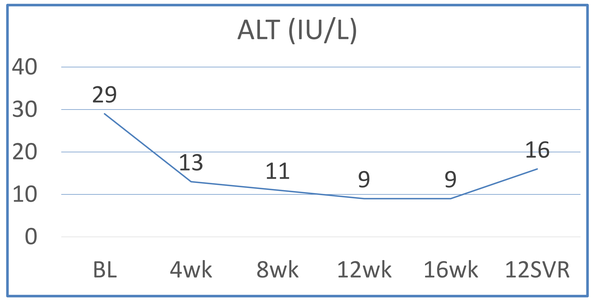
Dilemma: Due to DIs between DAAs and CBZ, multiple attempts were made to discontinue CBZ, but were unsuccessful. Neurosurgery offered surgical gamma knife management, but up to 40% of patients still require CBZ post-procedure.

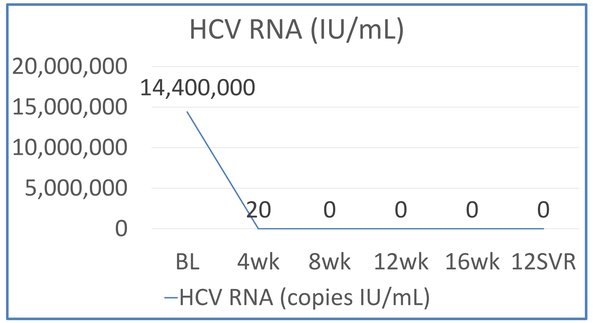
Treatment Plan:

- Daclatasvir (DAC)-sofosbuvir (SOF)-ribavirin (RBV) was proposed, but DAC is no longer available in the US[4].
- Patient was followed conservatively but developed thrombocytopenia and progression of fibrosis (FibroScan 14.7kPa).
- Patient prescribed 16 weeks of Glecaprevir (GLE)/pibrentasvir (PIB) + SOF 400mg (OFF-LABEL) with 4 weeks of ezetimibe 10mg (OFF-LABEL).

Table 1. HCV RNA and ALT Values with Ezetimibe Initiation

	Baseline	4wk	8wk	12wk	16wl	12SVR
HCV RNA (IU/mL)	14,400,000	20	ND	ND	ND	ND
ALT (IU/L)	29	13	11	9	9	16





Results

- At 4 weeks of treatment, HCV viral load was still detectable.
- Patient was hesitant to start ezetimibe due to past adverse reaction to statin and was re-educated on the purpose of ezetimibe and reassured.
- Ezetimibe was taken for weeks 4-8 of treatment.
- At week 8, HCV viral load was undetectable.
- Patient achieved SVR 12 (Table 1) and showed improvement of his FibroScan score to 9.6 kPa.

Discussion

- GLE/PIB is pangenotypic, has a high barrier to resistance[5], and has been proven safe and effective in combination with SOF + RBV for 16 weeks duration[6].
- Patient has history of anemia, making RBV undesirable.
- Ezetimibe blocks the NPC1L receptor which potentially inhibits HCV entry into the hepatocyte[7].
- There is a need for larger studies to determine the applicability of this case study to other patients.

References

1. Lo Re V 3rd, Kallan MJ, Tate JP, et al. (2014) Hepatic decompensation in antiretroviral-treated patients co-infected with HIV and hepatitis C virus compared with hepatitis C virus- monoinfected patients: a cohort study. *Ann Intern Med*, 160(6):369-79. doi: 10.7326/M13-1829.
2. AASLD-IDSA. Unique and Key Populations. Patients With HIV/HCV Coinfection | HCV Guidance (hcvguidelines.org)[6/5/2022]
3. Liverpool HEP Interactions (hep-druginteractions.org)[6/5/2022]
4. van Seyen, M., Smolders, E. J., van Wijngaarden, P., et al. (2019). Successful HCV treatment of patients on contraindicated anti-epileptic drugs: Role of Drug Level Monitoring. J of Hepatol, 70(3):552–554. https://doi.org/10.1016/j.jhep.2018.10.010
5. S. Zeuzem, G.R. Foster, S. Wang, A. Asatryan, E. Gane, et al. (2018). Glecaprevir–Pibrentasvir for 8 or 12 Weeks in HCV Genotype 1 or 3 Infection. *NEJM*, 378(4):354-369. DOI: 10.1056/NEJMoa1702417
6. Wyles D, Weiland O, Yao B, et al. (2019). Retreatment of patients who failed Glecaprevir/pibrentasvir treatment for hepatitis C virus infection. *J Hepatol*, 70(5):1019-1023
7. Feld JJ, Cypel M, Kumar D, Dahari H, Pinto Ribeiro RV, et al. (2020). Short-course, direct-acting antivirals and ezetimibe to prevent HCV infection in recipients of organs from HCV-infected donors: a phase 3, single-centre, open-label study. *Lancet Gastroenterol Hepatol*, 5(7):649-657. doi: 10.1016/S2468-1253(20)30081-9.

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